401 KAR 61:137.Leaks from existing petroleum refinery equipment.

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
Department for Environmental Protection
Division for Air Quality

RELATES TO: KRS 224.20-100, 224.20-110, 224.20-120; Appendix A to 40 CFR 60 (Method 21); 42 USC 7401 et. seq.; 42 USC 7407; 42 USC 7408; 42 USC 7410
STATUTORY AUTHORITY: KRS 224.10-100
NECESSITY AND FUNCTION: KRS 224.10-100 requires the Natural Resources and Environmental Protection Cabinet to prescribe regulations for the prevention, abatement, and control of air pollution. 42 USC 7410 likewise requires the state to implement standards for national primary and secondary ambient air quality. This regulation provides for the control of volatile organic compound emissions from leaks from existing petroleum refinery equipment.

Section 1.Definitions.
As used in this regulation, all terms not defined in this section shall have the meaning given to them in 401 KAR 61:001.

(1) "Affected facility" means each individual component within a petroleum refinery complex that could potentially leak volatile organic compounds (VOCs) to the atmosphere.

(2) "Component" means equipment or apparatus which includes, but is not limited to, pump seals, compressor seals, seal oil degassing vents, pipeline valves, flanges and other connections, pressure relief devices, process drains, and open-ended pipes that could potentially leak VOCs to the atmosphere.

(3) "A petroleum refinery complex" means a facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking, rearrangement or reforming of unfinished petroleum derivatives.

(4) "Leak" means the presence of a VOC concentration exceeding 10,000 ppm if tested in the manner referenced in Section 5 of this regulation.

(5) "Gas service" means that the VOC is gaseous at conditions that prevail in the component during normal operations.

(6) "Classification date" means February 4, 1981.

Section 2.Applicability.
This regulation shall apply to each affected facility commenced before the classification date defined in Section 1 of this regulation which is located in a county or portion of a county which is designated ozone nonattainment, for any nonattainment classification except marginal, under 401 KAR 51:010.

Section 3.Standard for VOCs.
The owner or operator of an affected facility shall:

(1) If an affected facility within the petroleum refinery complex is found to be leaking, repair the leak within fifteen (15) days. A component recheck shall be made after repair. If the leak is still present or a new leak is created by the repair, further maintenance shall be performed until the VOC emission drops below the screening value (10,000 ppm).

(2) Any time a valve is located at the end of a pipe or line containing VOCs, seal the end of the line with a second valve, a blind flange, a plug or a cap. This sealing device may be removed only when a sample is being taken. This requirement shall not apply to safety pressure relief valves.

Section 4.Monitoring and Reporting Requirements.
The owner or operator shall conduct monitoring of affected facilities and submit records as specified below:

(1) The refinery operator shall perform component monitoring using the method referenced in Section 5 of this regulation as follows:

(a) Monitor with a portable VOC detection device one (1) time per year (annually) pump seals, pipeline valves in liquid service, and process drains.

(b) Monitor with a portable VOC detection device four (4) times per year (quarterly) compressor seals, pipeline valves in gas service, and pressure relief valves in gas service.

(c) Monitor visually fifty-two (52) times per year (weekly) pump seals.

(d) No individual monitoring is necessary for pressure relief valves in liquid service and pipeline flanges.

(2) Pipeline valves and pressure relief valves for gas service shall be marked or noted so that their location is readily obvious to both the refinery operator performing the monitoring and the cabinet.

(3) If liquids are observed dripping from a pump seal, the seal shall be checked immediately with a portable detector to determine if a leak of VOCs is present.

(4) If a relief valve operates and venting to the atmosphere occurs, the operator shall monitor this valve immediately. Pressure relief devices which are tied in to either a flare header or vapor recovery device shall be exempted from the monitoring requirements.

(5) When a leak is located, a weatherproof and readily visible tag bearing an identification number and the date the leak is located shall be affixed to the leaking component. The location, tag number, date and stream composition of the leak shall also be noted on a survey log. When the leak is repaired, the date of repair and date and instrument reading of component recheck after maintenance shall be entered in the survey log and the tag discarded. The operator shall retain the survey log for two (2) years after the inspection is completed.

(6) After quarterly monitoring has been performed the refinery operator shall submit a report to the cabinet listing all leaks that were located but not repaired within the fifteen (15) day limit and a signed statement attesting to the fact that all monitoring has been performed as stipulated in the control plan. Leaks that cannot be repaired within fifteen (15) days shall be repaired during the next scheduled turnaround. If the cabinet requests it, the owner or operator shall demonstrate to the cabinet's satisfaction why the repairs could not be completed within the initial fifteen (15) day period. If the leak is unable to be brought into compliance, a variance shall be requested and obtained on an individual basis. Case-by-case alternatives approved by the cabinet, but not previously authorized by the U.S. EPA, shall be submitted to the U.S. EPA as a SIP revision.

Section 5.Test Methods and Procedures.

(1) Except as provided for in 401 KAR 50:045 , Appendix A to 40 CFR 60, Method 21, which has been incorporated by reference in 401 KAR 50:015, shall be used to determine compliance with the standard prescribed in Section 3 and monitoring requirements in Section 4 of this regulation.

(2) The owner or operator may elect to use alternate monitoring methods if it is demonstrated to the cabinet's satisfaction that the alternate methods shall achieve equivalent control efficiency.

Section 6.Compliance Timetable.

(1) Affected facilities which were subject to this regulation as in effect February 4, 1981, shall have achieved final compliance by January 1, 1982.

(2) The owner or operator of an affected facility that becomes subject to this regulation on or after the effective date of this regulation shall be required to complete the following:

(a) Submit a final control plan for achieving compliance with this regulation no later than three (3) months after the date the affected facility becomes subject to this regulation.

(b) Award the control system contract no later than five (5) months after the date the affected facility becomes subject to this regulation.

(c) Initiate on-site construction or installation of emission control

equipment no later than seven (7) months after the date the affected facility becomes subject to this regulation.

(d) On-site construction or installation of emission control equipment shall be completed no later than eleven (11) months after the date the affected facility becomes subject to this regulation.

(e) Final compliance shall be achieved no later than twelve (12) months after the date the affected facility becomes subject to this regulation.

(f) If an affected facility becomes subject to this regulation because it is located in a county previously designated nonurban nonattainment or redesignated in 401 KAR 51:010 after November 15, 1990, final compliance may be extended to May 31, 1995, and the schedule in paragraphs (a) through (d) of this subsection adjusted by the cabinet.

Section 7.Modifications.

(1) If, after at least two (2) complete annual checks, the refinery operator determines that modifications of the monitoring requirements are in order, he may request in writing to the cabinet that a revision be made. The submittal shall include data that have been developed to justify modifications in the monitoring schedule.

(2) If the cabinet finds an excessive number of leaks during an inspection, or if the refinery operator found an excessive number of leaks in a given area during scheduled monitoring, the cabinet shall increase the required frequency of operator inspections for that part of the facility.

Effective Date: June 24, 1992

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